

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 09-315812

(43)Date of publication of application : 09.12.1997

(51)Int.Cl.

C01B 33/12

C09D 5/25

H05K 3/28

(21)Application number : 08-299684

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(22)Date of filing : 24.10.1996

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(30)Priority

Priority number : 08 94784 Priority date : 25.03.1996 Priority country : JP

## (54) COATING SOLUTION FOR LOW DIELECTRIC CONSTANT SILICA BASED COATING FILM FORMATION AND BASE BODY WITH LOW DIELECTRIC CONSTANT COATING FILM

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a silica based coating film forming coating solution capable of forming an insulating film having low specific dielectric constant of  $\leq 3$ , excellent in adhesion to a surface to be coated, mechanical strength, chemical resistance and crack resistance by using a reaction product of a silica fine particle with a specific alkoxy silane and/or a halogenated silane.

SOLUTION: The coating film forming coating solution contains the reaction product of the silica fine particle with the alkoxy silane expressed by the formula  $X_nSi(OR)_{4-n}$  and/or the halogenated silane expressed by the formula,  $X_nSiX'_{4-n}$  or the hydrolyzed product (in the formula, X represents H, F, a 1-8C alkyl group, an aryl group or a vinyl group, R represents H, a 1-8C alkyl group, an aryl group or a vinyl group, X' represents a halogen atom, (n) represents integer of 0-3). As the silica fine particle, the one obtained by hydrolyzing or aging after hydrolyzing one or more kinds of the alkoxy silane is preferably used.

## LEGAL STATUS

[Date of request for examination] 18.07.2001

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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